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09/853,443	05/11/2001	Dale E. Gulick	2000.039600/TT3769	6306
23720	7590	07/20/2006	EXAMINER LANIER, BENJAMIN E	
WILLIAMS, MORGAN & AMERSON 10333 RICHMOND, SUITE 1100 HOUSTON, TX 77042			ART UNIT 2132	
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Technology Center 2100

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/853,443
Filing Date: May 11, 2001
Appellant(s): GULICK ET AL.

Mark W. Sincell
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 28 July 2005 appealing from the Office action mailed 21 March 2005.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

Claims 1-80 are pending in the application. Claims 1-24, 26-71, and 73-80 stand fully rejected under 35 U.S.C. 102(e) as being anticipated by Gennaro (U.S. Patent No. 6,317,834). Claims 25 and 72 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over Gennaro in view of Huang (U.S. Patent No. 5,856,789).

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: new grounds of rejection exist.

NEW GROUND(S) OF REJECTION

Art Unit: 2132

Claims 3, 5, 6, 13, 18, 19, 27, 33, 34, 37, 48, 49, 63, 64, 67, 74 were inadvertently omitted from the Office action mailed 21 March 2005. A concise explanation of how the claims are rejected using the prior art references is located in section (9).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,317,834	GENNARO	11-2001
5,856,789	HUANG	1-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

Claims 1-24, 26-71, 73-80 are rejected under 35 U.S.C. 102(e) as being anticipated by Gennaro, U.S. Patent No. 6,317,834. Referring to claims 1-4, 8-12, 14-16, 21-24, 26, 28-31, 32, 35, 36, 39-47, 50-62, 65, 66, 68-71, 73, 75-80, Gennaro discloses a biometric authentication system wherein biometric information in the form of fingerprints, voice pattern, retinal pattern, iris scans, and signatures (Col. 1, lines 35-39) are captured along with personal information unique to each individual (Col. 1, lines 62-67 & Col. 2, lines 32-34), which meets the limitation of receiving biometric data. The biometric data is then encrypted with random data (Col. 2, lines 1-5, 27-31), which meets the limitation of receiving a nonce, and encrypting the biometric data using the nonce and to transmit only encrypted biometric data and the nonce. The encrypted biometric information is then stored along with the random data in a biometric database (Col. 2, lines 45-57). The system is also capable of decrypting the biometric data (Col. 3, lines 4-19),

Art Unit: 2132

which meets the limitation of the master device decrypting the encrypted biometric data.

Gennaro discloses the user inputting personal information as a response to random challenge questions (Col. 2, lines 28-34). The personal information meets the limitation of a secret. These responses are used in a computing environment to calculate data and would therefore be stored in some fashion. Since Applicant's claim requires only "to store the secret", the limitation is met because non-volatile and volatile storage alike would meet this limitation. Therefore, these responses being received into a computing environment would require them to be at least temporarily stored within a memory or a cache of some variety in order for them to be used within the computing environment. The responses can then be used to generate an encryption key and encrypt the biometric data (Col. 2, lines 34-47), which meets the limitation of encrypting the biometric data using the secret, transmitting at least an indication of the secret with the biometric data, and transmitting only the encrypted biometric data and the nonce.

Referring to claims 5, 18, 33, 48, 63, Gennaro discloses that the random data and the responses, which act as the secret, are used to generate the encryption key that encrypts the biometric data (Col. 2, lines 27-47), which meets the limitation of encrypting the biometric data using the secret and the nonce.

Referring to claims 6, 13, 19, 27, 34, 37, 49, 64, 67, 74, Gennaro discloses that one of the responses could be a telephone number (Col. 9, lines 10-12), which meets the limitation of a globally unique identifier that is used, along with the secret and the nonce (addressed above), to encrypt biometric data.

Referring to claims 7, 20, Gennaro discloses acquiring a personal identifier (Col. 2, line 9), which would meet the limitation of the secret comprising a GUID.

Referring to claims 16, 17, 35, 38, 46, 50, 61, 65, Gennaro discloses that in order to authenticate a biometric record the user provides the system with a personal identifier, which meets the limitation of a GUID or secret, and a biometric sample that corresponds to the biometric record that is being authenticated (Col. 4, lines 41-56).

Claim Rejections - 35 USC § 103

Claims 25, 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gennaro, U.S. Patent No. 6,317,834, in view of Huang, U.S. Patent No. 5,856,789. Referring to claims 25, 72, Gennaro discloses a biometric authentication system wherein biometric information in the form of fingerprints, voice pattern, retinal pattern, iris scans, and signatures (Col. 1, lines 35-39) is captured along with personal information unique to each individual (Col. 1, lines 62-67 & Col. 2, lines 32-34), which meets the limitation of receiving biometric data. The biometric data is then encrypted with random data (Col. 2, lines 1-5, 27-31), which meets the limitation of receiving a nonce, and encrypting the biometric data using the nonce and to transmit only encrypted biometric data and the nonce. The encrypted biometric information is then stored along with the random data in a biometric database (Col. 2, lines 45-57). The biometric information can also be encrypted using a key generated from password information (Col. 1, line 67 – Col. 2, line 2), which meets the limitation of receiving a secret, and encrypting the biometric data using only the secret. Gennaro does not disclose that the system utilizes a processor, north bridge, and south bridge. Huang discloses a computer system containing a processor, north bridge, and south bridge (Col. 2, lines 63-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a computer system configuration of Huang in the biometric

Art Unit: 2132

authentication system of Gennaro because Huang discloses that disclosed computer system configuration is state of the art (Col. 2, line 63).

NEW GROUNDS OF REJECTION

Referring to claim 3, Gennaro discloses a biometric authentication system wherein biometric information in the form of fingerprints, voice pattern, retinal pattern, iris scans, and signatures (Col. 1, lines 35-39) are captured along with personal information unique to each individual (Col. 1, lines 62-67 & Col. 2, lines 32-34). The biometric data is then encrypted with random data (Col. 2, lines 1-5, 27-31). The encrypted biometric information is then stored along with the random data in a biometric database (Col. 2, lines 45-57). The system is also capable of decrypting the biometric data (Col. 3, lines 4-19). Gennaro discloses the user inputting personal information as a response to random challenge questions (Col. 2, lines 28-34), which meets the limitation of receiving a secret. The personal information meets the limitation of a secret. These responses are used in a computing environment to calculate data and would therefore be stored in some fashion. Since Applicant's claim requires only "to store the secret", the limitation is met because non-volatile and volatile storage alike would meet this limitation. Therefore, these responses being received into a computing environment would require them to be at least temporarily stored within a memory or a cache of some variety in order for them be used within the computing environment. The responses can then be used to generate an encryption key and encrypt the biometric data (Col. 2, lines 34-47), which meets the limitation of transmitting at least an indication of the secret with the biometric data.

Referring to claims 5, 18, 33, 48, 63, Gennaro discloses that the random data and the responses, which act as the secret, are used to generate the encryption key that encrypts the

Art Unit: 2132

biometric data (Col. 2, lines 27-47), which meets the limitation of encrypting the biometric data using the secret and the nonce.

Referring to claims 6, 13, 19, 27, 34, 37, 49, 64, 67, 74, Gennaro discloses that one of the responses could be a telephone number (Col. 9, lines 10-12), which meets the limitation of a globally unique identifier that is used, along with the secret and the nonce (addressed above), to encrypt biometric data.

(10) Response to Argument

Applicant's arguments filed 28 July 2005 have been fully considered but are not persuasive. Applicant argues that Gennaro does not disclose a nonce, which is not persuasive because Gennaro discloses that biometric data is encrypted with an encryption key generated from a random combination of answers provided by the individual during a challenge/response session (Col. 2, lines 27-31). After an authentication attempt a new challenge list is randomly generated to create the next encryption key (Col. 3, lines 15-19). This meets Applicant's definition of a nonce because new random challenges are generated each time, and would therefore be a "used a single time". Applicant pointed to page 35, lines 16-21, to define a nonce and the recitation states :

"One use of the monotonic counters 435A and 435B is a source for a nonce. Each nonce must be different. Differences may be predictable or unpredictable. Nonces may be used to help prevent replay attacks. When a message is encrypted, changing even one bit changes the encrypted message. Any strong encryption method distributes even one-bit change extensively. A nonce may be used in a challenge-response method, such as described below."

The above-mentioned recitation of Gennaro meets Applicant's definition because new randomly generated challenges are generated (Col. 3, lines 15-20) and the challenges can be prompting the user for personal information such as a zip code, telephone number, or birth date (Col. 9, lines 7-11). Therefore, Gennaro's challenges are changed even one-bit and used in a challenge response method.

Applicant argues that Gennaro does not disclose authenticating biometric data using a random number is not persuasive because Gennaro using the randomly generated key to decrypt a stored biometric sample and if the decryption is unsuccessful, the individual cannot be verified and his or her authorization status will be declared as "failed", thereby terminating the verification session (Col. 7, lines 31-35). Therefore, Applicant's argument that decryption is not the same operation as authentication is not persuasive because in the system of Gennaro, decryption is effectively used for authentication.

Applicant's arguments with respect to the combination of Gennaro in view of Huang are identical to the previous arguments about Applicant's definition of a nonce, and have been fully addressed above.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section (9) above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one

Art Unit: 2132


of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

Benjamin E. Lanier 

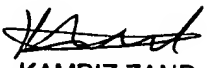
Art Unit: 2132

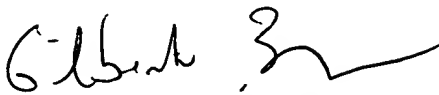
A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:

Conferees:

Gilberto Barron

~~Matthew Smithers~~


KAMBIZ ZAND
PRIMARY EXAMINER


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JAMES DWYER, DIRECTOR
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